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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,887	11/13/2001	Stefan Wode	200-080	6440

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Walter Ottesen
Patent Attorney
P.O. Box 4026
Gaithersburg, MD 20885-4026

EXAMINER
KENNY, STEPHEN

ART UNIT	PAPER NUMBER
3726	8

DATE MAILED: 04/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/986,887	WODE, STEFAN	
	Examiner	Art Unit	
	Stephen J Kenny	3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 November 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) ____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *6, 7* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 are rejected under 35 U.S.C. 112 second paragraph.

Claim 1 recites the limitations "the pushed on end region" in line 7; and "the clamping operation" in lines 11 & 12. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "determining" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 4 is rejected under 35 U.S.C. 112, second paragraph, since applicant does not clearly define the variable d_3 with respect to d (as well as variables d_1 & d_2). Absent applicant establishing a relationship between these variables, it is not clear how to interpret these variables.

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, since applicant does not clearly explain what is meant by a "turning point". According to Figure 1, there are several turning points (e.g. at K/d_2 there is a turning point, however the clamping force is not terminated at this point) any one of which could be interpreted to be the "turning point" which applicant claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, & 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Schlei et al. (EP 0548627).

Regarding claim 1, Schlei discloses a method for attaching a tubular piece of elastomeric material to a connecting part comprising: positioning a metal clamping ring around a tubular piece& a connecting part; radially applying a clamping force to said ring to reduce the diameter of said ring and thereby tightly clamping said tubular piece on said connecting part; detecting the radial force developed during the clamping operation between said clamping ring and said tubular piece (page 4, claims 1, & 2); observing and measuring a force/displacement curve during said clamping operation (Schlei discloses "detecting" said force/displacement, which the examiner interprets to be the equivalent of plotting a curve, graph, or even tabulating values of force vs. displacement); and utilizing a characteristic feature of said force/displacement curve as a basis for a criterion for switching off the application of said clamping force (page 4, claim 2).

Regarding claim 2, Schlei discloses the tubular piece is a resilient member of an air spring & connecting part is a cover or piston of an air spring (page 4, claim 1 preamble).

Regarding claims 3 & 5, Schlei discloses that the clamping operation is terminated after the axial force reaches a predetermined limit value, which is the equivalent of a "defined maximum of a curve" (as required in claim 3) or "turning point" of a curve (as required in claim 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Alternatively, claims 1-3, & 5 along with claims 4, 6, & 7 are rejected under 35 U.S.C. 103(a) as obvious over Schlei.

Regarding claims 1 & 2, in the alternative to the rejection of claims 1 & 2 under U.S.C. 102 as discussed above, in the event the applicant provides convincing evidence against the examiner's position, the act of plotting the curve of the data measured by Schlei is not considered an inventive step. Forming a graph of known data requires merely routine skill in the art, and would be readily available and performed by an artisan of ordinary skill.

Regarding claims 3 & 5, in the alternative to the rejection of claims 3 & 5 under U.S.C. 102 as discussed above, it would be readily available to an artisan of ordinary skill in the art to plot the curve of force vs. displacement data (which Sclei does measure) and terminate the clamping operation at a turning point of said curve, at which point the curve begins to drop. Graphs of data are widely known to be an effective means for presenting data, and are advantageous in that they also indicate trends (e.g. exponential & linear relationships), which are not as easily discernable from tabular data. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to plot a curve of force vs. displacement as measured by Schlei in order to realize the advantages discussed above. The act

of taking data (as measured by Schlei) and forming a plot from the known values is not an inventive step.

Furthermore, Schlei's "predetermined limit value", when represented graphically, would indicate a turning point of said curve, from which the curve would begin to drop. An artisan of ordinary skill would readily recognize the "turning point" as a cut-off value, and terminate the clamping operation in order to prevent over-clamping and damaging the connecting part or tubular piece.

Regarding claim 4, as best understood, the additional criteria which is based upon the undefined variables as discussed in the U.S.C. 112 rejection above, it would require merely routine skill in the art to read a plot of Sclei's measured data to determine if the magnitude of the parameters measured where beyond a specified threshold.

Regarding claim 6, Schlei discloses the instant invention as discussed above. Upon completion of the clamping operation, it would be a readily obvious step to inspect the connection to ensure that the predetermined limit value lies within a certain tolerance. This is a necessary step, and would be readily known and performed by an artisan of ordinary skill in the art, to ensure the quality and effectiveness of the connection. In fact, by Schlei stating that the clamping operation is terminated once a predetermined limit value has been reached, determining whether the force/displacement value is within a certain tolerance is met *a priori.* In other words, if the clamping operation terminates once a designated parameter (e.g. force/displacement) reaches a predetermined limit value, and the clamping operation has terminated, then the predetermined limit value must have been reached – and therefore the parameter must be within a certain tolerance.

Regarding claim 7, Schlei discloses a connecting part of plastic deformable material (elastomeric material as stated in claim 1) having a failure elongation which is not exceeded (page 4, claim 2). Schlei discloses that the clamping force is terminated at a predetermined limit value. The examiner interprets this predetermined limit value to be the failure elongation point. Since it is known that plastic deformation occurs at the point of material failure (i.e. where the stress vs. strain cure is no longer linear), resulting in a compromised structural integrity, and in this case, a faulty connection. Therefore terminating the clamping force before the failure elongation point would result in a more uniform (i.e. the connector circumference is uniformly deformed radially inward) connection.

Conclusion

The prior art made of record on the attached PTO-892, and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J Kenny whose telephone number is 703-306-0359. The examiner can normally be reached on mon - fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Vidovich can be reached on 703-308-1513. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

sk SK
April 3, 2003

GREGORY VIDOVICH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700